# UTILITY PATENT APPLICATION TRANSMITTAL
## (Only for new nonprovisional applications under 37 CFR 1.53(b))

| | |
|---|---|
| Docket No. | : 36508/WWM/G207 |
| Inventor(s) | : Henry C. Yuen, Thomas E. Ward, III, Douglas B. Macrae |
| Title | : SYSTEMS AND METHODS FOR ADVERTISING TRAFFIC CONTROL AND BILLING |
| Express Mail Label No. | : EL368759203US |

**ADDRESS TO**: Assistant Commissioner for Patents
Box Patent Application
Washington, D.C. 20231                      Date: November 18, 1999

1. __X__ **FEE TRANSMITTAL FORM** *(Submit an original, and a duplicate for fee processing).*

2. **IF A CONTINUING APPLICATION**
    ____ This application is a  of patent application No. .

    __X__ This application claims priority pursuant to 35 U.S.C. §119(e) and 37 CFR §1.78(a)(4), to provisional Application No. 60/108,960.

3. **APPLICATION COMPRISED OF**

    **Specification**
        __15__ Specification, claims and Abstract (total pages)

    **Drawings**
        __2__ Sheets of drawing(s) (FIGS. 1 to 2)

    **Declaration and Power of Attorney**
        ____ Newly executed
        __X__ No executed declaration
        ____ Copy from a prior application (37 CFR 1.63(d))(for continuation and divisional)

4. ____ **Microfiche Computer Program** *(Appendix)*

5. ____ **Nucleotide and/or Amino Acid Sequence Submission** *(if applicable, all necessary)*
        ____ Computer Readable Copy
        ____ Paper Copy (identical to computer copy)
        ____ Statement verifying identity of above copies

6. **ALSO ENCLOSED ARE**
        ____ Preliminary Amendment
        ____ A Petition for Extension of Time for the parent application and the required fee are enclosed as separate papers
        ____ Small Entity Statement(s)
            ____ Statement filed in parent application, status still proper and desired
            ____ Copy of Statement filed in provisional application, status still proper and desired

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# UTILITY PATENT APPLICATION TRANSMITTAL
## (Only for new nonprovisional applications under 37 CFR 1.53(b))

Docket No.: 36508/WWM/G207

    ____ An Assignment of the invention with the Recordation Cover Sheet and the recordation fee are enclosed as separate papers

    ____ This application is owned by pursuant to an Assignment recorded at Reel , Frame

    ____ Information Disclosure Statement (IDS)/PTO-1449

        ____ Copies of IDS Citations

    ____ Certified copy of Priority Document(s) *(if foreign priority is claimed)*

    ____ English Translation Document *(if applicable)*

    __X__ Return Receipt Postcard (MPEP 503) (should be specifically itemized).

    __X__ Other - Appendix A (15 pages) and Appendix B (16 pages)

## 7. CORRESPONDENCE ADDRESS

*CHRISTIE, PARKER & HALE, LLP, P.O. BOX 7068, PASADENA, CA 91109-7068*

Respectfully submitted,

CHRISTIE, PARKER & HALE, LLP

By _____

Wesley W. Monroe
Reg. No. 39,778
626/795-9900

WWM/amb

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# FEE TRANSMITTAL
# UTILITY PATENT APPLICATION

## DATE: November 18, 1999

Docket No.  :  36508/WWM/G207
Inventor(s) :  Henry C. Yuen, Thomas E. Ward, III, Douglas B. Macrae
Title       :  SYSTEMS AND METHODS FOR ADVERTISING TRAFFIC CONTROL AND BILLING

### FEE CALCULATIONS

| | CLAIMS | NUMBER FILED | NUMBER EXTRA | RATE | CALCULATIONS |
|---|---|---|---|---|---|
| A | TOTAL CLAIMS | 1 - 20 = | 0 | 0 x $9.00 | $0 |
| B | INDEPENDENT CLAIMS | 1 - 3 = | 0 | 0 x $39.00 | $0 |
| C | SUBTOTAL | | SMALL ENTITY FEE = A + B <br> LARGE ENTITY FEE = 2 X (A + B) | | 0 |
| D | BASIC FEE | | SMALL ENTITY FEE = $380.00 <br> LARGE ENTITY FEE = $760.00 | | 760.00 |
| E | MULTIPLE-DEPENDENT CLAIMS FEE | | SMALL ENTITY FEE = $130.00 <br> LARGE ENTITY FEE = $260.00 | | |
| F | TOTAL FILING FEE (ADD LINES C, D, AND E) | | | | 760.00 |

List Independent Claims:  1

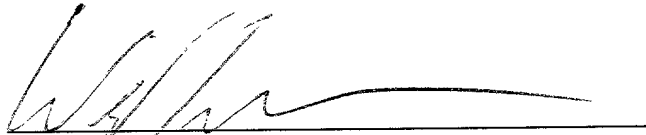## METHOD OF PAYMENT

__X__  No filing fee enclosed

__X__  No Deposit Account Authorization.

Respectfully submitted,

CHRISTIE, PARKER & HALE, LLP

By _____
Wesley W. Monroe
Reg. No. 39,778
626/795-9900

1    36508/WWM/G207

# SYSTEMS AND METHODS FOR ADVERTISING
# TRAFFIC CONTROL AND BILLING

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## CROSS-REFERENCE TO RELATED APPLICATION

This application claims priority of U.S. Application No. 60/108,960 filed November 18, 1998, the disclosure of which is incorporated fully herein.

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## BACKGROUND OF THE INVENTION

Providers of Electronic Program Guides ("EPG"), such as Gemstar Development Corporation, also provide opportunities for advertisers to reach television viewers through the EPG. While the viewers use the EPG to make program selections and to perform other EPG functions, the EPG will display advertisements. Advertisements to be displayed on a viewer's EPG will be comprised of, among other things, advertising text, graphic objects, and other advertising elements, often referred to in the Advertising Industry as "Ad Creatives." Ad Creatives can be created and displayed by the host EPG display system in various locations on the EPG. At any one time when the viewer displays the EPG, multiple Ad Creatives may be simultaneously displayed on the EPG display on the viewer's television monitor, or other display device.

International Application No. PCT/US95/11173 (International Publication No. WO 96/07270), the disclosure of which is incorporated by reference herein for all purposes, illustrates an EPG that provides viewer-to-EPG interaction and provides Picture-In-Guide ("PIG") display of the television program simultaneous with the display of the EPG.

U.S. Application No. 09/120,488, the disclosure of which is incorporated by reference herein for all purposes, illustrates further improvements to an EPG.

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1    36508/WWM/G207

BRIEF DESCRIPTION OF THE DRAWINGS
     FIG. 1 shows the screen of an Interactive Electronic Program
5    Guide; and
     FIG. 2 is a flow chart of a method according to an
embodiment of the invention.


DETAILED DESCRIPTION
10   The present invention controls the traffic of advertisements
to be displayed on the viewer's display device and determines an
appropriate amount of money for which each advertiser should be
billed for the display of that advertiser's Ad Creative.
     Each advertiser will pay the EPG provider to display the Ad
15   Creative(s) provided by that advertiser.  Multiple advertisers
will want the EPG provider to display the Ad Creative(s) provided
by that advertiser according to agreed upon display terms.
Display terms will include one or more of a number of elements,
including but not limited to:

20
          1.)   Type of Advertisement;
          2.)   Placement/Location on the Display Device;
          3.)   Proportional "Size" of the Advertisement;
          4.)   Time Duration for Each Display of a Particular
25                Advertisement;
          5.)   Expansion Specifications;
          6.)   Access    Relationship    Advertising    Target
                Specifications;
          7.)   Display    Relationship    to    Viewer    Profile
30                Information and Characteristics;
          8.)   Scheduling Specifications;
          9.)   Ad Creative Elements;
          10.)  Ad Interactivity


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In one embodiment of the present invention, the traffic and billing control terms are defined for administration at the EPG distribution head-end only (a "Head-End Traffic and Billing Control System," also referred to as a "Head-End Embodiment" ). Attached hereto as Appendix A, and incorporated in full here by reference as if fully stated here, are the specifications for one Head-End Embodiment of the present invention.

In another embodiment of the present invention, the traffic and billing control terms are defined for administration in part at the individual viewer's television, and in part, at the EPG distribution head-end (a "Distributed Traffic and Billing Control System," also referred to as a "Distributed Embodiment"). Typically, a Distributed Traffic and Billing Control System would have a back-link from the viewer's television to the head-end. The back-link could be direct, via a network back-link such as through the Internet, a communication requiring manual intervention, or some other method to communicate certain information collected about the advertisement terms for a particular advertisement to the EPG distribution head-end.

Because of the nature of some of the above-identified terms, in some embodiments of the present invention, billing for presentation of any particular advertisement can be variable according to the viewer-by-viewer display results.

1.)   Type of Advertisement

The type of advertisement considers, among other things, what is being advertised.   That is, is a product being advertised, or is a future television program being advertised, etc.   The type of advertisement also considers the format of the particular advertisement .   A particular EPG system can display advertisements in a number of ways, in different area of the EPG display, and at different locations within the EPG operation. For instance, an EPG, such as Gemstar's Guide 98, provide an EPG

Grid Guide display that presents the Grid Guide for program
selection in one fixed portion of the display monitor's screen.
5   The example EPG displays the real-time video of the current
television program in a PIP (Picture-in-Picture) Window (also
referred to as a PIG (Picture-in-Guide) Window). See for example,
Figure 1 on page 3 of Appendix A attached hereto.  In other fixed
display window locations, the EPG displays what are referred to
10  as panel ads.  Within the television program listing of the Grid
Guide, the EPG can display what are referred to as channel ads.
For examples of each of the above-described screen elements, see
Figure 1 on page 3 of Appendix A attached hereto.

The present invention provides the EPG administrator to
15  charge  a  different  amount  for  different  types  of  the
advertisements.   For instance, the present invention provides
the EPG administrator with the option of charging more money for
a particular time slot for a Panel Ad than for a Channel Ad.

The present invention further provides for traffic control
20  for  the  presentation  of  each  type  of  advertisement.   For
instance, the present invention provides the EPG administrator
to choose to restrict the number of product advertisements that
are displayed at any one time on the viewer's EPG display.
Furthermore, the present invention provides the EPG administrator
25  with the option of choosing to restrict the number of channel ads
that are displayed at any one time on the viewer's EPG display.

2.)  Placement/Location on the Display Device

The present invention provides the EPG administrator with
30  the option of charging different amounts for advertisements
depending upon the placement and location of the advertisement
in the EPG display.  For instance, the EPG administrator can
charge more money for a particular time slot for the Panel Ad
that is located as seen in Figure 1 on page 3 of Appendix A
35  directly below the PIP Window (Panel Ad # 1) than for the Panel

Ad located at the bottom left corner of the screen (Panel Ad #2).

    There are multiple types of Channel Ads, some of which do

5    not occupy a fixed position. For the Channel Ads that do occupy a fixed position, the present invention provides the option of charging, e.g., more money for a Channel Ad that is displayed toward the top of the Grid Guide program listing than for one that is displayed at the bottom of the listing.

10    There are different variable location Channel Ad types. There is a "Relative" Channel Ad that appears in a position relative to the top of the Grid. Relative Channel Ads are spaced every $n$ channel slots. Relative Channel Ads appear and disappear as the viewer moves through the pages of the Grid Guide. A

15    location for the first ad is selected on the first page of the Grid Guide; subsequent copies of the ad follow every $n$ channel slots in the Grid Guide.

    Another type of variable location ad type is the "Parent" Channel Ad. Parent Channel Ads are linked to a specific channel

20    listing located directly above the ad in the Grid Guide.

    One embodiment of different type of advertisements in an EPG is described in the Advertising Specifications attached hereto as Appendix B and which is incorporated in full here by reference as if fully stated here.

25    Another type of EPG initiated advertisement is displayed when the viewer is watching television in full screen mode. One way that the EPG presents advertisements during full screen television mode is that it displays the advertisement in the PIP Window of the television as the real-time video programming of

30    the currently tuned program continues to be displayed on the main portion of the television display monitor.

    Another way that the EPG presents advertisements during full screen television mode is in the form of an overlay. The overlay advertisement can be opaque or can appear as a translucent

35    "watermark." The overlay advertisement can be static or dynamic.

As an example, consider the viewer that is watching the Super Bowl. When the team most favored in the viewer's geographic area makes a touchdown, a figure such as the Energizer Bunny moves from one side of the screen to the other at the bottom of the screen.

The present invention allows the EPG Administrator to charge distinct amounts depending upon the placement and location for each of the different ad placement types.

3.)  Proportional "Size" of the Advertisement

The present invention allows the EPG administrator to charge an amount dependent upon the proportional size of the advertisement to be displayed as compared to the entire display area available on the viewer's display device. The size of the advertisement can be defined by the number of "pixels" required to display the advertisement. In one embodiment of the present invention, different advertisement types are of fixed size. In such an embodiment, the proportional size billing factor is not typically used. However, in other embodiments, advertisement types can differ in size. For instance, consider Panel Ad #1 in Figure 1 on page 3 of Appendix A. Panel Ad #1 could be shared by two or more advertisers. The present invention provides the EPG administrator to bill according to the relative size of each ad displayed within the Panel Ad # 1 Window.

4.)  Time Duration for Each Display of a Particular Advertisement

In one embodiment of the present invention, each advertiser pays a pre-determined amount of money for the opportunity to display a particular advertisement during a pre-defined time slot. One embodiment of time slots and time avails are described in Appendix A hereto which has previously been incorporated by reference in this application.

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The advertisement is predefined for display as a particular ad type for display in a particular location on the EPG display screen.  With the present invention, during the above-mentioned pre-defined time slot, more than one advertisement can be rotated for display for a pre-determined amount of time.

In one embodiment of the present invention, the advertiser is billed for a time duration for the display of the advertisement calculated based on the pre-defined time slot and the pre-defined rotation schedule during that time slot.  In such an embodiment, the billing does not reflect whether a viewer actually views the advertisement.  One embodiment of rotation of advertisements is described in Advertising Specifications attached hereto as Appendix B and which has previously been incorporated in full in this application by reference.

In another embodiment of the present invention, the billing for a particular advertisement depends upon the actual duration of time for which the advertisement is displayed to, and viewed by, the television viewer.  Typically, such an embodiment would require a back-link from the individual viewer's television to the EPG distribution head-end.

5.)    Expansion Specifications

Advertisements can be expanded to provide the viewer with additional information about the advertised product or program. The viewer uses the EPG to request the additional information. For instance, the viewer can select an information icon on the advertisement display using the viewer's remote control device. The additional information can be displayed on some portion of the display screen such as, for example, in the information box (see Figure 1 on page 3 of Appendix A). More than one level of additional information can be available for display by the EPG. Alternatively, the additional information can include    The present invention allows the EPG administrator to charge the

advertiser for the additional information that must be stored to accompany the advertisement.  In a Distributed embodiment of the

5    invention, the EPG administrator can also charge the advertiser for actual viewer accesses to the additional information.

6.)    Access Relationship Advertising Target Specifications

The present invention provides the EPG administrator with

10    the capability to narrowly target particular advertisements based on a viewer's actions with the EPG.  That is, the present invention provides the EPG administrator with the capability to specify that a particular advertisement be displayed on a viewer's television screen under certain conditions, those

15    conditions being determined by the viewer's operation of, and access to, the EPG.

For instance, if the viewer highlights a particular program listing, the EPG administrator can instruct the EPG to display a particular advertisement.  In another instance, the EPG

20    administrator can instruct the EPG to display a particular advertisement depending upon what screen or mode of the EPG that the viewer activates.  For example, if the viewer accesses the movie theme screen of the EPG, the EPG administrator can instruct the EPG to display a particular advertisement.  As another

25    example, the EPG administrator can instruct the EPG to display a particular advertisement as the first Panel Ad #1 every time that the viewer first turns on the television according to a particular schedule (a day, a week, etc.).  The types of access relationships that can be communicated to the EPG as a condition

30    for display of an advertisement are described in co-pending U.S. Application No.  09/120,488, which is incorporated in full by reference here as if fully stated here.

Access relationship targeting can be accomplished in both Head-End and Distribution Embodiments.  For instance, the EPG

35    administrator can instruct the EPG to display a particular

advertisement depending on data coded in the information packets sent to the viewer's television. The EPG system at the viewer's
5   television decodes the instructions and displays the advertisement when the specified conditions are met.

Billing for access relationship targeting in a Head-End Embodiment would provide the advertiser with the opportunity to have its advertisement displayed according to the described
10   criteria but would not be dependent upon the number of times that the advertisement was actually displayed. On the other hand, billing for access relationship targeting in a Distributed Embodiment would provide the EPG administrator the opportunity to charge the advertiser for each display of the advertisement--
15   the information concerning the number of displays would be collected through a back-link.

7.)  Display Relationship to Viewer Profile Information and Characteristics

20   The present invention provides the EPG administrator with the capability to narrowly target particular advertisements based on a viewer's historical television viewing and video recording viewing patterns and/or characteristics that can be determined by collection of historical viewer information. The types of
25   viewer profile characteristics and relationships that can be communicated to the EPG as a condition for display of an advertisement are described in co-pending U.S. Application No. 09/120,488, which is incorporated in full by reference here as if fully stated here.

30   The present invention provides the EPG administrator with the capability to specify that a particular advertisement be displayed on a viewer's television screen under certain conditions, those conditions being determined by the viewer's historical viewing patterns and other viewer profile
35   characteristics. For instance, if the viewer typically watches

sports programs, the EPG administrator can instruct the EPG to display a particular advertisement related to sports. As another

5    example, if the viewer typically watches the programs related to animals, the EPG administrator can instruct the EPG to display a particular advertisement concerning dog food.

The EPG administrator would publish the conditional criteria for this type of advertising to the advertisers. The advertisers

10    would define for the EPG administrator the conditions for which a particular advertisement should be displayed.

Viewer profile targeting can be accomplished in both Head-End and Distribution Embodiments. For instance, the EPG administrator can instruct the EPG to display a particular

15    advertisement depending on data coded in the information packets sent to the viewer's television. In a Head-End embodiment, the EPG system local to the viewer's television would collect the viewer profile and characteristic data and store the information in the memory of the local system. In a Head-End Embodiment, the

20    local EPG system at the viewer's television decodes the instructions and displays the advertisement when the specified conditions are met.

Billing for viewer profile targeting in a Head-End Embodiment would provide the advertiser with the opportunity to

25    have its advertisement displayed according to the described criteria but would not be dependent upon the number of times that the advertisement was actually displayed. On the other hand, billing for viewer profile targeting in a Distributed Embodiment would provide the EPG administrator the capability to charge the

30    advertiser for each display of the advertisement--the information concerning the number of displays would be collected through a back-link.

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8.)   <u>Scheduling Specifications</u>

        The present invention provides the EPG administrator with

5    the capability to schedule a particular advertisements for
display on a particular date, or day of the week for a particular
time frame.  The present invention also provides the capability
to schedule a particular advertisement for display during a
particular time slot.  The EPG administrator can further schedule

10   a particular set of advertisements for a rotation of
advertisements during a particular time slot.  The rotation and
scheduling of advertisements is discussed in both Appendix A and
Appendix B to this application, both of which have been
previously incorporated by reference in full in this application.

15       The present invention further provides the EPG administrator
with the capability to bill according to the particular date, day
of the week, time slot, and rotation schedule defined for a
particular advertisement.

9.)   <u>Ad Creative Elements</u>

20       Some Ad Creatives will be comprised of text and static
graphical objects for display with a pre-determined color
palette.  The present invention provides the EPG administrator
to bill according to, among other things, the number of colors

25   defined in a supporting color palette, the amount of storage
required to store the text and graphical objects of an Ad
Creative.   Other Ad Creatives may include additional and/or
alternative advertising elements, including but not limited to:
dynamic graphical objects, sound, video, and other types of

30   advertising elements.
        The present invention allows the EPG administrator to bill
according to the storage requirements of the advertising
elements.    The present invention further allows the EPG
administrator to define the magnitude of the visual impact of a

35   particular advertisement, and to bill accordingly.

Consider, for instance, a static, text and graphic object Channel Ad for a particular horse racing event.  For comparison to the static channel ad, visualize a channel ad that displays a panoramic video of horses racing from the left side of the channel ad to right side of the channel ad.  The present invention provides the EPG administrator with the capability to set a higher billing amount for the higher visual impact of the panoramic video Channel Ad than for the static Channel Ad. Graphic and text dynamics are described in the Advertising Specifications attached hereto as Appendix B and which has been previously incorporated in full in this application by reference.

Ad Creatives will be accessible to the host EPG display system by, among other ways: 1.)  through direct access by the host EPG display system at the viewer's television to one or more libraries of advertisements residing on a network system, such as the Internet; 2.) by transmitting advertisements to be displayed by the host EPG display system to one or more libraries at a central location at the head end of a television EPG distribution system for subsequent distribution of such advertisements to each television EPG, though, e.g., the Vertical Blanking Interval (the "VBI") and by the host EPG display system at the viewer's television storing the advertisements received from the VBI in a database of advertisements; 3.) through direct access by the head end of a television EPG distribution system to one or more libraries of advertisements residing on a network system, such as the Internet for selection by the head end of appropriate advertisements for subsequent distribution of such advertisements to each television EPG, though, e.g., the Vertical Blanking Interval (the "VBI") and by the host EPG display system at the viewer's television storing the advertisements received from the VBI in a database of advertisements.

10.) <u>Ad Interactivity</u>

Advertisements displayed in the EPG can provide

5   interactivity with the Television and the video recorder.  For

instance, "Tune-in" Ads allow the viewer to tune directly to a

show in progress from a highlighted ad block if the ad block has

program information associated with it.  Typically, the viewer

selects the program for tuning by using the viewer's remote

10  control device.  For instance, the viewer can press the remote

control enter button while a Tune-in Ad Block is highlighted.

"Direct-record" Ads allow the viewer to record a show in

progress or schedule a program for recording at a later time.

A program can be designated for recording from a highlighted

15  Direct-record Ad block if the ad block has program information

associated with it.  Typically, the viewer uses the viewer's

remote control device to instruct the EPG to schedule a program

for recording.   In one embodiment, the viewer highlights the

Direct-record ad block and "presses" the right action button on

20  the Grid Guide.

"Watch" Ads with associated program information allow a

viewer to place a future-scheduled program on the viewer's Watch

list.

The present invention provides the EPG Administrator with

25  the capability to charge different amounts for the different

types of interactivity available for each advertisement.

Appendix B hereto, which has previously been incorporated in full

into this application, contains a description of some of the

different types of ad interactivity.

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CLAIM
1.    A computer system for managing advertisements for use
in an interactive electronic television program guide (IPGs)
comprising:

means for storing information regarding advertisements
to be displayed on IPGs including one or more of the group of:
times of day of ad display, duration of ad displays, location of
ad displays, days of week of ad displays, television programs
broadcast at or about the time of ad display; rotation rate for
ads, number of ads being rotated with the ad, memory required for
storage of ad at IPG location, payment rates for ads;

means    for    calculating    the    distribution    of
advertisements based on the information stored in said means for
storing; and

means for distributing advertisements to IPGs based on
the output of the means for calculation.

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SYSTEMS AND METHODS FOR ADVERTISING
TRAFFIC CONTROL AND BILLING

5
ABSTRACT

AMB PAS218966.1-*-11/18/99 5:36 PM

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# GUIDE 98/99 Advertising Traffic and Billing Requirements Specification v.7

## 1.0     Introduction and Overview

The objective of this document is to provide an overview of the Ad Sales Process as we have identified, as well as outline the fundamental requirements of the Traffic and Billing system for use in assisting in the design.

An outline of the topics discussed follows:

- Overview of the Ad Space Essentials
  - Guide Screens
  - Guide Ad Page
  - Ad types
  - Slot Numbers
  - Rotation Numbers
- Time Slots
  - Time Slot/Day Part Packages
- Ad Sales Flow Process
- T & B System Requirements
  - Setting Accounts and Contracts
  - Creating an Avail Inventory
  - Building Schedules
  - Reconciling Procedure
  - Billing Activities
    - Affidavits
    - Invoices
    - Accounts Receivable Records
  - Analysis
    - Management Reporting
- Utilities
  - Setting Up Operators
  - Security
- Proposed T & B User Interface

Additionally, there are three appendixes included at the end of this document. Appendix B is a general mapping of broadcast dayparts to our initial Guide Plus+ advertising avail dayparts. Appendix C is a glossary of terms used in this document.

In order to fully understand the overall Traffic and Billing system requirements, it is important to first understand the essential ad components of Guide Plus+ ads, as well as the sales process.

## 1.2 Ad Space Essentials

In order to support ads, it is necessary to design a traffic and billing system which will allow ad orders to be taken, an ad inventory to be created, ads to be scheduled, ads to be distributed and displayed, schedules verified, and invoices rendered.

Because our product is unique as an interactive medium (web-like banner ad look), but located in a familiar spot (on TV), our goal is to design a system that will emulate a broadcasting spot market by using familiar terms and concepts. However, hardware and firmware limitations are in conflict with this goal, as they prevent a more "TV like" advertisement (e.g., full motion video spots).

## 1.3 Guide Plus+ Advertisement Avail Definition

An ad avail is defined as Date+ space+ timeslot.

### 1.3.1 Date Defined

The Date is defined as the actual calendar date and day of the week. This is important for advanced orders (early season premier orders) as well as long-term purchases requesting only specific days of the week (e.g. M-F only). The broadcast "day" actually begins with the first time slot (illustrated in Appendix B at the end of this document) which for our purposes begins at 5:45 AM. Therefore, if an advertiser is interested in purchasing an ad to run at 4:00 AM, they are actually purchasing time during the previous calendar day.

### 1.3.2 Space Defined

Space has five different components. In hierarchy order, they are Guide Screen, Page Number, Ad Type, Slot Number and Rotation Number.

#### 1.3.2.1 Guide Screen

Guide Plus+ has a number of different screens that can be accessed using the navigational bar at the top of the Guide. Immediately upon entering the Guide (by pressing the Guide button on the remote control), the user enters the Grid Guide Screen. Others screens that can be accessed and which will include advertising will include the Schedule display screens, First Level Sort screen, Second Level Sort screens, the Messages Screen, and the Channel Editor Screens. Future services (such as NewsGuide) will also include ad spaces. Because each of these screens may display different ads, it is important that the T & B system support this concept. Initially, however, the system will only need to support a single screen.

Guide Screens List:
- Main Grid Guide
- First Level Sort
- Second Level Sort
- Schedule Display Screen
- Messages Display Screen
- Channel Editor Screen
- Future: Other Services (such as News, Weather, etc. could be added)

#### 1.3.2.2 Guide Page Number

Most of the screens also have multiple pages. When a user scrolls up or down, they will automatically change pages. It is assumed that most Grid Guides will initially have approximately ~80 channels, and with 9 channels per page, the average user will have as many as ~9 pages for their grid alone. Also, depending on their Sort selections, they may page through many, many movie pages. The T & B system must support the concept of multiple pages within each guide screen. Initially, however, we will begin with just one ad per space for all pages.

Guide Page Number List:
- Main Grid Guide will have an average of approximately 9 pages down and up to 48 pages across (to view the complete 2 day schedule)
- First Level Sort will have as many pages as there are sort categories. For example, we currently have three first level sort categories: Sports, Movies and Children's. In the future, we may add News or other sort categories, offering more pages.

- Second Level Sort will have as many pages as there are second level category search results. For example, if I select Movies as the first level sort, and Drama as the second level sort, I could have several pages depending on the results of that sort. There are 8 listed on each page, so the average number of pages at this level will likely be 3.
- Schedule Display Screen will have as many pages as needed to represent the individual users personal schedule. Initially, it is anticipated that we will only use the first page of this.
- Messages Screen will initially have only have one page. In the future, we may expand our use of the Messaging function and would want to also add to the number of pages capable of displaying ads.
- Channel Editor Screen will have one page.
- Other Future Services will have varying numbers of pages depending on the configuration of the services and our advertising objectives.

### 1.3.2.3  Ad types

Currently we've created two different interactive ad types: Panel Ads and Channel Ads.

> **1.3.2.3.1  Panel Ads** – Ads that are located to the left of the Guide pages which display both bitmap graphics as well as text.
>
> **1.3.2.3.2  Channel Ads** – Ads that are located within the Grid section of the Guide (as well as other like areas) that can display logos as well as text.

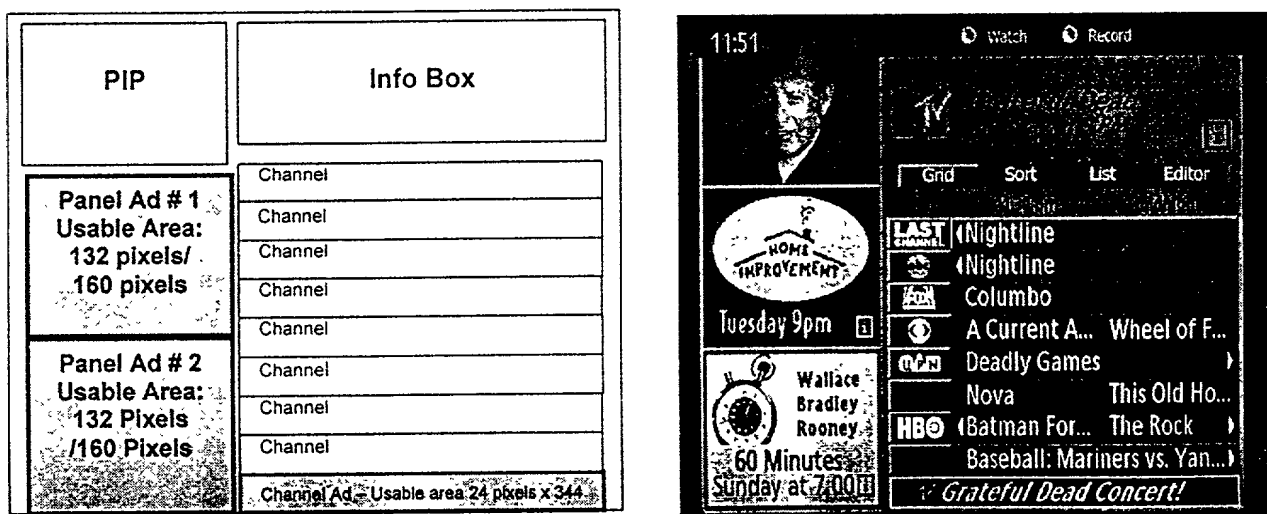Location and sizes of these ads are illustrated in Figure 1 below:



**Figure 1: Sample Ad Types**

Both types of ads perform the interactive functions of "opening" and displaying additional ad information as well as provide the ability to immediately tune to, record or schedule to watch the show linked to the ad. Channel Ads open automatically when you scroll onto them, but panel ads require a push of the "info" button on the remote to open them. Channel ads display an info box first, and with the push of the "info" button on the remote, display an expanded info box. Panel ads display the expanded info box and collapse down to the info box when the "info" button is pressed the second time (if there is only one expanded info box as a part of the ad).

Full descriptions of ad sizes, functionality and limitations are extensively outlined in the following Gemstar Documents: The Guide Plus+ '98 Advertising Specification as well as the Graphic Object Maker Specification.

### 1.3.2.4  Ad Slot Number

> 1.3.2.4.1  Panel Ads will have three slots:

- Slot 1: The upper panel ad occupying the space just below the PIP.
- Slot 2: The lower panel ad occupying the space just below slot 1.
- Slot 3: Combining both slots 1 & 2 and using the entire panel ad space for a single ad.

1.3.2.4.2 Channel Ads will have nine slots:
- Slots 1 – 9 will coincide with channel slots 1 – 9 within the grid on each page.

1.3.2.4.3 Parent Channel Ads

We have developed the concept of Parent Channel ads, which are ads that link to a particular channel within the grid. For example, if NBC wants to purchase a channel ad for Friends and locate the ad adjacent to the NBC affiliate in the Grid Guide, we will call the NBC Channel the Parent to be linked. To eliminate the possibility of multiple parent ads within the same time slot (potentially creating more than 2 channel ads per page), we will restrict the number one.

1.3.2.4.4 PIP vs. Non-PIP Guide Plus versions

PIP Guides have nine channel slots for each page, while non-PIP VCR guides have only five slots per page.

### 1.3.2.5 Ad Rotation Number

Panel Ad space can have a number of **rotations**. The firmware will store ads to be displayed in equal (or weighted) sequence for each new Guide "session". That means that when a viewer accesses the Guide during an ad time slot, they will see ad A displayed. If they page down or exit the guide, then re-enter and begin another "session", they will view a different ad (e.g. ad B) for the same space during the same time slot. For simplicity sake, we will begin our ad venture with 4 ad rotations (A, B, C and D) for each Panel Ad space. Channel ads will not have rotations.

There are separate rotation queues for all screens and all pages. Therefore, even by limiting the rotations initially to just four, the ads A, B C and D may be in different positions at any given point during an individual's guide usage session.

### 1.3.3 Time Slots and Packages

Along with the physical space that an ad will occupy, the other aspect of an ad avail that has been defined is the **time slot**. At the beginning, we intend to have 14 timeslots of varying lengths closely mirroring many of the standard broadcast day-parts. These 14 timeslots are outlined in the following table (table 1):

| Daypart Timeslots | Time(s) of Day | Total Hours | Time slices Included* |
|---|---|---|---|
| Early Morning | 5:45 AM – 8:44:59 AM | 3 hours | 1 – 6 |
| Morning | 8:45 AM – 11:44:59 AM | 3 hours | 7 – 12 |
| Daytime | 11:45 AM – 4:14:59 PM | 4.5 hours | 13 – 21 |
| Early Fringe | 4:15 PM – 6:44:59 PM | 2.5 hours | 22 – 26 |
| Access | 6:45 PM – 7:44:59 PM | 1 hour | 27 – 28 |
| Prime 1 | 7:45 PM – 8:14:59 PM | .5 hour | 29 |
| Prime 2 | 8:15 PM – 8:44:59 PM | .5 hour | 30 |
| Prime 3 | 8:45 PM – 9:14:59 PM | .5 hour | 31 |
| Prime 4 | 9:15 PM – 9:44:59 PM | .5 hour | 32 |
| Prime 5 | 9:45 PM – 10:14:59 PM | .5 hour | 33 |
| Prime 6 | 10:15 PM – 10:44:59 PM | .5 hour | 34 |
| Prime 7 | 10:45 PM – 11:14:59 PM | .5 hour | 35 |
| Late Fringe | 11:15 PM – 1:44 AM | 3 hours | 36 - 40 |
| Overnight | 1:45 AM – 5:44:59 AM | 4 hours | 41 – 48 |

## Table 1: Guide Plus+ Avail Daypart Timeslots

We expect that as our inventory needs increase, we will slice these packages even further. It is possible that within the future, we will also want to increase the gross number of time slots (i.e. 5 minute time slots each hour of the day which combined will mean 288 time slots for one 24 hour period).

### 1.3.4 Ad Pricing

Each of the aspects described above (day of week, spot rotation, screen selection, page selection) will determine pricing for each ad purchase. Additionally, we will want to support the concept of charging differently for ads that are memory intensive versus ads that are less memory intensive.

1.3.4.1 Additional pricing components

1.3.4.2 **Time Rate:** As described above, we will begin with 14 time slot avail windows. It is expected that initially, the rate for these may all be the same. We will require, however, the flexibility in the T & B system to allow time slot pricing to be changed to allow charging a premium rate for slots in higher demand (e.g., Prime 1 – 6) and allow providing a discount for slots that may otherwise be unsold (e.g., Overnight).

1.3.4.3 **Space Rate:** Initially, both the upper and lower panel ads will be charged the same rate. We may find through research that one or the other is accessed more often resulting in our desire to place a premium on the space. The T & B system must allow this flexibility.

1.3.4.4 **Ad Size:** It is anticipated that we may want to charge 2X for a double panel ad initially. The T & B system must allow the ability to charge a premium for this space, or a % discount if both are purchased based on results gleaned following initial ad trials.

## 2.0 Overview of Sales Process

2.1 The Ad Sales, Creation, Distribution (scheduling and traffic) and Billing processes are outlined in figure 2 .

## 2.2    Overview of the Sales Order Flow Process

When the Guide Ad Sales department receives an **order** (or contract) for advertising, the Traffic and Billing Clerk will create an account and enter the order information into the T & B System. The system must then create a **confirmation** of the contract to be returned to the Advertiser for approval. The clerk will send an order to the Graphics Department to **create the ad**, and use the same Ad Creative ID when creating the weekly advertiser **schedule**. A graphics artist (either in-house or within the Graphics Department of the Agency or Advertiser) will use GOMaker to paste-up an ad to be reviewed and approved by the Advertiser. Once approved, the ad will be forwarded to a T & B clerk who will match it up with the advertiser's schedule and the Ad Creative ID. Simultaneously, the T & B clerk will create and forward a schedule (weekly through the duration of the ad order) to the Advertiser for approval. Once all advertiser schedules are approved, the process of building a traffic schedule must take place. The T & B clerk will compile a complete list of all advertisers' schedules into one combined traffic schedule. The weekly traffic schedule and Ad Creative files will be sent to IB who will transmit the ads to the Guide equipped TV for display. To close the loop back to render invoices, IB will submit verification that the ads were sent to the insertor to be transmitted. Following the **reconciliation** of the schedules sent and the ads received at the inserters, the T & B clerk will create **affidavits** of proof of performance and **invoices**. Payments received on the invoices will be entered into the individual Account ledgers.

# 3.0    Requirements of the Traffic and Billing System

To fully support the advertising effort of Guide Plus+ and future guide products, the Traffic and Billing system will be required to support Five main functions: Account Maintenance, Creating an Avail Schedule, Scheduling Ads (Trafficking), Billing Activity and Management Analysis. Additionally, the system must allow security level and functional access by the operator to be password protected. The following sections will more clearly define each of these aspects.

### 3.1  Account Maintenance
   3.1.1    The System must allow the T & B Clerk to set up an Account with the basic account information including:
   - Client Company name; street address, city, state, zip; contact names (2); contact phone numbers (2); e-mail addresses (2), and client product type(s) (from product type table).
   - Priority (Fixed, ROS 1, ROS 2, ROS 3, ROS 4, ROS 5)
   - Pre-Emptable? (Y or N)
   - Make Good? (Y or N)

   3.1.2    Accounts must have entry fields to maintain **historical contact information** including date, time, rep, purpose, required follow-up, and notes of each contact. This information could be located in a standard contact management add-on module.

   3.1.3    Once an account is set up, the Advertiser will have an Account Number or ID. The Next step will be to set up a **Contract** within an account. Advertisers may have multiple contracts or orders under a single account. The elements of a unique contract are as follows:
   - Start Date and Stop Date (Month/Day/Year)
   - Total Dollar Amount (e.g., $60,000)
   - Total Number of Spots (e.g., 1200 spots @$50. each + 100 bonus spots @$0 each)
   - Spot Cost (actual, average calculated)
   - Agency and/or Rep Firm (From an editable list of Agencies)
   - Account Executive (From editable list of Reps)
   - Pre-Approved Traffic Schedule (Y or N) (This will determine if the advertiser will require regular approval of schedule throughout contract or if contract confirmation approval is sufficient)
   - Contract Type (Standard, Trade, PSA/Promo, Co-op, Political)
   - Affidavit type (full detail, minimal detail).

- Payment terms (i.e. Net 30, 10 days less 10%, equal monthly, etc.)
- Contract Remarks
  - P. O. Number
  - Status (Active, hold, inactive)
  - Tax ID (For tax exempt Advertisers)

3.1.4 It is possible for a single advertiser to have more than one contract running simultaneously. It is also possible that one advertiser may choose to set up separate accounts for different contracts to keep their own records separate. Each contract will have a PO associated with it from the advertiser.

    3.1.4.1 There must be a location to select a "bill to" address – especially if the account has an Agency and/or Rep firm associated with it. Bills may be sent to Client, Agency, or Rep Firm. Defaults should be as listed:

        3.1.4.1.1 Bill sent to client if there is only a client

        3.1.4.1.2 Bill sent to Agency if there is a client and agency.

        3.1.4.1.3 Bill sent to Rep Firm if there is a client, agency and rep firm.

    3.1.4.2 **Tax Rates** must be set up with the contract. If the tax rate for advertising is 5%, we must have the ability to add this (or omit this) as appropriate. We may need tax tables for this (unclear at this time). Also, tax-exempt (i.e. American Cancer Society?) will be charged 0%. The default should be 0(?).

    3.1.4.3 **Program Package Discounts** may be negotiated as a condition of the contracts. The ability to enter a XX.XX% discount to the spot cost or the overall purchase should be supported to allow the contract confirmation to be built based on the discount at the spot level as well as at the total package purchase level.

3.1.5 No charge Advertisers

    3.1.5.1 In-house, promotional ads will be trafficked through the system at no charge. Although there will be no receivable related to a no-charge, in-house campaign, it will use otherwise unsold inventory and must be tracked as an account.

    3.1.5.2 For this purpose, we will likely want to set up multiple "house" accounts that would be no-charge accounts.

    3.1.5.3 Other promotional campaigns may be trafficked for non-profit organizations at no charge. These are a different type of ad called a **PSA or Public Service Announcement**. Again, these accounts must be set up and their schedules trafficked the same as regular paying clients, but there will not be any dollars collected for these ads. Examples of these clients may be American Cancer Society (no/stop smoking ads), etc.

## 3.2 Client Detailed Advertising Strategy

3.2.1 Contracts will coincide with sales orders and will outline specific terms of the agreement for the advertising purchase. Those points will include total dollars that will be spent, the timeframe in which it will be spent (start date + end date), and the "strategy" which will be employed. **Strategy Elements** for each contract will include:

- Number of different Ad Creative Concepts/Scripts
- Type of ads (single panel, double panel, channel)
  - Position preference should be available if single panel or channel is selected.
  - Parent or fixed (if appropriate)
- Approved days of the week (M – Su)
- Number of Weeks during the term of the contract
- Maximum spots per day
- Minimum spots per day
- Approved Dayparts (from all dayparts available)
- Daypart Weighting (e.g., 100% Prime 3; 50% overnight + 50% daytime)

- From the dayparts selected, each can then be weighted. The default should be equal weighting.

3.2.1.1     Creative **Ad Copy Library**

      3.2.1.1.1     Each Client will have their own "library" of Creative Ad Copy files from which to select copy for insertion. Each creative will have it's own unique ID number to be used for trafficking. Ads will be created in GOMaker, but the ID numbers must be maintained in the T & B system.

         3.2.1.1.1.1     When a creative order is sent to a graphics artist for creating with GOMaker, the creative ID number will sent with the order.

      3.2.1.1.2     system security preventing the T & B clerk from using X creative from Y Client's library.

## 3.3 Building a Contract Confirmation

3.3.1     Using the Information from the Contract and the Strategy, the T & B clerk will build a contract confirmation outlining line-by-line a schedule for the terms of the contract.

      3.3.1.1     For each different creative, there will be a separate contract line.

         3.3.1.1.1     Lines will display the following elements
- Client Priority (pre-filled from contract info)
- Make Good instructions (pre-filled from contract info)
- Zones (manual select from all zones, default will be "all")
- Type (manual select from all types for each line)
- Start Date (default to contract start date – must be editable within contract window)
- End Date (default to contract end date – must be editable within contract window)
- Start Time (approved dayparts should be pre-filled from strategy info and editable)
- End Time (approved dayparts should be pre-filled from strategy info and editable)
- Days Authorized (pre-filled from strategy info)
- Total Spots (manual add)
- Unit Cost (pre-filled from contract info and editable)
- Total Cost (calculated from above info)
- Ad Copy ID # (copy #'s will be issued as a part of each contract set-up and will need to be manually filled here)

         3.3.1.1.2     Many items, as indicated above, will be pre-filled in the contract confirmation lines. Each line, however, should be editable by the T & B clerk until it conforms to all of the terms of the contract.

         3.3.1.1.3     Each line within a contract confirmation must have a line ID #. This number will be used as a reference on both the weekly schedule as well as the reconciliation reports and invoices.

3.3.2     Once completed, the clerk should be able to print and mail the contract Confirmation to the Advertiser for approval. When the client approves the contract confirmation, the contract will then be scheduled into the avail inventory.

## 3.4 Creating an Avail Inventory

3.4.1     Using the information listed in sections 1.4 – 1.10 of this document, an avail schedule must be built based on the following definition: Date+ space+ timeslot.

      3.4.1.1     A Standard **Broadcast calendar** will be used.

         3.4.1.1.1     Monday – Sunday

         3.4.1.1.2     Weeks 1 – 52 (January 1 = week 1)

3.4.2     Avail Inventory Maintenance will be an administrative function that will happen on a routine basis. We anticipate that avails will change (e.g. slicing down some of the day parts into shorter time frames such as changing from 30 minutes to 10 minutes display) based on our

inventory needs. When these changes happen, previously scheduled ads must not be adversely affected.

3.4.2.1   Routine maintenance will need a simple UI to modify the tables that drive the schedule. Avail maintenance should be a password-protected function, although it is anticipated that initially the T & B clerk will also perform the function of schedule maintenance.

3.4.2.2   The Avail Inventory must be able to be maintained for a rolling year. This will allow annual purchasers to pre-plan their ad campaigns and expenses. It will also allow us to change pricing or make additional avail slots available as necessary.

**3.5 Building an Individual Client Schedule**

3.5.1   Using the information previously entered in the contracts section and the Ad Avail sections of the system, the T & B clerk must now have the ability to schedule ad copy into the Avail Inventory on a client-by-client basis.

3.5.2   It is anticipated that this process will be done on a Monday or Tuesday prior to the start of the next Broadcast week. For example, it is anticipated that for broadcast week 35, the schedule will be created on Monday or Tuesday during broadcast week 34.

3.5.2.1   Once the schedules are complete, the T & B clerk will print and send a copy to the advertiser for approval (if required). If the schedule must be approved, it should be considered "pending" until approval is received. If the schedule does not need to be approved, it should be considered "final" when built.

3.5.3   Initially, we anticipate that building an individual client schedule will be an entirely manual process. Once contract confirmation is entered into a database, only clients who have requested purchases during a particular broadcast week must be queried and printed in "priority" order.

3.5.4   Using this report, the top priority client(s) will have their schedules built first using the open avails. Once this process is complete, the second priority clients' schedules will be built and so forth.

3.5.5   Based on the pre-qualifiers specifically set forth in the contract section, the T & B system should only present an avail schedule that is relevant to each contract line.

3.5.5.1   Specifically, this refers to single panel ad inventory versus double panel ad inventory versus channel inventory. If the T & B clerk is attempting to schedule all panel ads, only panel ad inventory should be presented to them.

3.5.5.1.1   In future versions, the system should have two types of scheduling available to it: auto and manual.

3.5.5.1.1.1   With Auto Scheduling, the system will know the criteria on a line by line basis for each contract and should be able to match those up with the available inventory giving first priority to the highest priority clients.

3.5.6   Individual Ad Schedules will be built based on Advertiser Priority on a line by line basis. In order to accomplish this, all lines from every active contract must be selected from the database by Advertiser priority. Those with priority "Fixed" will be selected first and manually scheduled. Those with priority ROS 1 will be selected second and manually scheduled from what inventory remains. The ROS 2 lines will then be selected and schedule, etc., until all lines scheduled to run during for the week are scheduled in the available slots.

3.5.6.1   Each line that is completely scheduled will need to be marked and no longer selected in the weekly scheduling process.

3.5.6.2   Each line that is completely scheduled will then be entered into the advertiser's account ledger for reconciliation and billing.

3.5.6.2.1   The T & B clerk will select from what is available to set up a schedule. Once selected, an avail will be "grayed out" or made unavailable for another advertiser.

3.5.6.2.2 Once a schedule status is deemed "final" (e.g., approved by the advertiser or pre-approved via the contract confirmation process), the avail will no longer appear as an option to select or even to be viewed.

3.5.7 When a schedule is built, the status of the schedule must be "pending" and forwarded to the advertiser for approval. Once all approvals are received, the schedule is changed to "final" and compiled for insertion into the main traffic schedule.

3.5.7.1 The schedule will include "creative" copy that will be handled as a separate function with GOMaker. Because each line in the contract is driven by the "Creative" copy, the T & B system must have the ability to match up an advertiser approved GOMaker file to an advertiser approved schedule before the order is considered "final".

3.5.7.2 When the original order is set up in the account, the T & B system will send the GOMaker artist a "creative" ID number to match up with the schedule. There may be multiple creative orders to match with multiple schedules to complete a full order. For example, NBC might want to spend 50% of their budget on *Friends* and 50% on *Dateline*. The order schedules would be created simultaneously, but there would be two separate creative orders for the schedule.

3.5.7.3 The concepts of Unscheduling spots as well as exchanging creative or ad copy must be supported as well.

## 3.6 Building a Traffic Schedule

3.6.1 Once all individual schedules are built for the week, the result will be a complete traffic schedule for all advertisers.

3.6.2 Schedules are either pre-approved or require approval (based on contract driven parameters) If weekly schedules require approval, they must remain "pending" until the client submits approval.

3.6.3 A weekly traffic schedule must be "final" at some point (TBD – likely to be 1 – 3 days) prior to the beginning of the broadcast week, so all individual schedules must be either approved or cancelled by this closing date.

3.6.3.1 Initially, this will certainly be a manual process. In future versions, it would be beneficial to have this completed automatically.

3.6.4 Although the traffic schedule will be completed on a weekly basis, IB will only transmit ads on a daily basis so only a daily traffic schedule will be sent to IB.

## 3.7 Reconciling Procedures

3.7.1 The ability to reconcile ad activity must be supported by the T & B system. Initially, this process will likely be relatively manual, but it should be a longer-term goal to automate the process where possible.

3.7.1.1 Reports of ads received at the inserter sights must be retrieved and compared with the individual client schedules that were built.

3.7.1.1.1 When ads are missed, the T & B clerk will have to set up a make-good for the advertiser's schedule or process a credit to their ledger.

3.7.1.1.2 When ads are correctly trafficked, the T & B clerk will compile affidavits verifying proof of performance to send with invoices.

3.7.1.2 This process, either manual or automated, will likely need to be done on a daily or weekly basis.

## 3.8 Billing Activities

3.8.1 Affidavits will be compiled from data received from the inserters as described in section 3.7.

3.8.1.1 It is not anticipated that we will provide affidavits until version 2 of the T & B system.

3.8.1.1.1 Affidavits will be a notarized document declaring that our records indicate an accurate account of our proof of ad performance (ads reached inserters) to the advertiser's approved schedule.

3.8.1.1.2 Standard Affidavit reports will include Notary Information to speed processing following printing.

3.8.1.1.3 In version 2, the affidavit of performance will map directly to the invoices rendered to a client.

3.8.2 **Invoices** will be rendered monthly for each completed line of a contract.

    3.8.2.1 Because the lines are "creative" driven for scheduling purposes, it is conceivable that we will want to ensure that no single line in a contract should exceed 30 days. That will allow the system to trigger a minimum of one invoice for each "active" contract during its term and will minimize large invoices.

    3.8.2.2 Invoices will be rendered monthly and will be a request for payment for all ad spots run during the month based on the advertiser's approved schedule.

    3.8.2.3 Invoices will list all charges, credits, adjustments, and other account activity that may have taken place during the processing month.

    3.8.2.4 Invoices should have their own unique ID to be inserted into the advertiser's account ledger.

        3.8.2.4.1 Posting payments

        3.8.2.4.2 The process of posting payments will initially be manual and be completed by the clerk entering each account when a check/payment is received on an invoice.

        3.8.2.4.3 The clerk will review the ledger of charges posted to the account and verify that the payment received is accurate to what was invoiced. The payment will then be applied to the account, which must result in updating the records to reflect this adjustment.

        3.8.2.4.4 By version 2 of the T & B system, it would be useful to have a batch process where a number of payments could be entered to multiple accounts and applied simultaneously to speed the process.

3.8.3 **Accounts Receivable Records** must be kept on each Account.

    3.8.3.1 On a per-contract basis, we will be sending invoices monthly and receiving payments routinely, so we will need to establish basic accounting functionality within the T & B system by version 2.

        3.8.3.1.1 Each Account must contain a ledger which displays the following:
- Client Name
- Date Account Opened
- Account Executive
- Contract ID(s)
- Transaction Date(s) (Date A/R record(s) are posted to the account)
- Invoice ID (s)
- Transaction type (s) (Payment, Added Fees, Invoice, Adjustments, Agency Commission, etc.)
- Amount (s)
- Balance Due
- An Aging window (30+, 60+, 90+, 120+)

3.8.4 **Account Reports**

    3.8.4.1 The T & B clerk should have the ability to run a number of queries on account activity. Such reports should include total amount of sales for the week, month, quarter by rep, account, agency, etc.

    3.8.4.2 Queries may be run routinely to determine the status of orders. These reports will include how many (and how much $$) active accounts there are, how many schedules are not confirmed, and how many ads are awaiting approval on creative from the client. The T & B clerk must be pre-notified of all of these issues through a set of daily reports that are set up based on these and other business rules.

    3.8.4.3 Account Activity/Form Status

        3.8.4.3.1 The T & B system will create documentation that will leave the advertiser in various states. In order to accurately track the state of

each piece of "paper", the T & B system must have the ability to "set up" documents as "draft" or "final" as well as "approved" and "pending approval". A list of each of these components is included in a table in this document during the discussion of forms.

3.8.4.4    Forms

As outlined below, there are standard broadcasting advertising forms that must be created by the T & B system they are as follows in table 2 below:

| Forms | Signed/Approved By Advertiser? | Signed/Approved By Gemstar? | Printable? | On-screen review? | Notarized? |
|-------|-------------------------------|------------------------------|-----------|-------------------|------------|
| Contract Confirmation | Yes | Yes | Yes | Yes | No |
| Weekly Schedule | Yes or pre-approved | No | Yes | Yes | No |
| Affidavit | No | Yes | Yes | No | Yes |
| Invoice | No | No | Yes | Yes | No |

## Table 2: Standard Broadcast Advertising Forms Required

### 3.9  Management Reporting Requirements

Eventually, extensive reporting functionality will be required of the T & B system. Reports will basically fall into three categories: A/R and Account reports, Open Avail Scheduling reports and Post-Air Reconciliation reports.

3.9.1    A/R and Account Reports will include all aspects of Receivable and aging. It is anticipated that we will want to also evaluate the effectiveness of sales by a number of variables including but not limited to sales/rep, sales/agency, sales/ advertiser, sales/space, sales/zone, sales/day part, etc.

3.9.2    Open Avail Scheduling reports will be tools that will give the T & B Clerk and sales Manager a look into sales % for planning purposes.

3.9.2.1    Additionally, as discussed in section 3.5 of this document, it will be necessary to run contract line reports (in Advertiser priority order) to effectively schedule spots into the avails.

3.9.3    Post-Air Reconciliation reports will allow an analysis of how effectively the inventory was managed and sold.

3.9.3.1    Reconciling schedules to "actual" will be first priority.

3.9.3.2    Secondary priority will include reports which can assist in the analysis of how much of the avail inventory was sold, how much revenue was generated, how much of the inventory was "given away" (as make-goods, in-house promos or Public Service Announcement promos), etc.

## Appendix B:

| Time Slice | Time Frame | AM/PM | Standard Broadcast Dayparts | Guide+ Avail. Dayparts | Time Displayed |
|---|---|---|---|---|---|
| 1 | 5:45 - 6:14:59 | A | Early Morning | **Early Morning** | 3 hours |
| 2 | 6:15 - 6:44:59 | A | Early Morning | Early Morning | |
| 3 | 6:45 - 7:14:59 | A | Early Morning | Early Morning | |
| 4 | 7:15 - 7:44:59 | A | Early Morning | Early Morning | |
| 5 | 7:45 - 8:14:59 | A | Early Morning | Early Morning | |
| 6 | 8:15 - 8:44:59 | A | Early Morning | Early Morning | |
| 7 | 8:45 - 9:14:59 | A | Early Morning | **Morning** | 3 hours |
| 8 | 9:15 - 9:44:59 | A | Daytime | Morning | |
| 9 | 9:45 - 10:14:59 | A | Daytime | Morning | |
| 10 | 10:15 - 10:44:59 | A | Daytime | Morning | |
| 11 | 10:45 - 11:14:59 | A | Daytime | Morning | |
| 12 | 11:15 - 11:44:59 | A | Daytime | Morning | |
| 13 | 11:45 - 12:14:59 | A | Daytime | **Daytime** | 4.5 hours |
| 14 | 12:15 - 12:44:59 | P | Daytime | Daytime | |
| 15 | 12:45 - 1:14:59 | P | Daytime | Daytime | |
| 16 | 1:15 - 1:44:59 | P | Daytime | Daytime | |
| 17 | 1:45 - 2:14:59 | P | Daytime | Daytime | |
| 18 | 2:15 - 2:44:59 | P | Daytime | Daytime | |
| 19 | 2:45 - 3:14:59 | P | Daytime | Daytime | |
| 20 | 3:15 - 3:44:59 | P | Daytime | Daytime | |
| 21 | 3:45 - 4:14:59 | P | Daytime | Daytime | |
| 22 | 4:15 - 4:44:59 | P | Early Fringe | **Early Fringe** | 2.5 hours |
| 23 | 4:45 - 5:14:59 | P | Early Fringe | Early Fringe | |
| 24 | 5:15 - 5:44:59 | P | Early News | Early Fringe | |
| 25 | 5:45 - 6:14:59 | P | Early News | Early Fringe | |
| 26 | 6:15 - 6:44:59 | P | Early News | Early Fringe | |
| 27 | 6:45 - 7:14:59 | P | Prime Access | **Access** | 1 hour |
| 28 | 7:15 - 7:44:59 | P | Prime Access | Access | |
| 29 | 7:45 - 8:14:59 | P | Prime Time | **Prime 1** | .5 hour |
| 30 | 8:15 - 8:44:59 | P | Prime Time | **Prime 2** | .5 hour |
| 31 | 8:45 - 9:14:59 | P | Prime Time | **Prime 3** | .5 hour |
| 32 | 9:15 - 9:44:59 | P | Prime Time | **Prime 4** | .5 hour |
| 33 | 9:45 - 10:14:59 | P | Prime Time | **Prime 5** | .5 hour |
| 34 | 10:15 - 10:44:59 | P | Prime Time | **Prime 6** | .5 hour |
| 35 | 10:45 - 11:14:59 | P | Late News | **Late Fringe** | 3 hours |
| 36 | 11:15 - 11:44:59 | P | Late Fringe | Late Fringe | |
| 37 | 11:45 - 12:14:59 | P | Late Fringe | Late Fringe | |
| 38 | 12:15 - 12:44:59 | A | Late Fringe | Late Fringe | |
| 39 | 12:45 - 1:14:59 | A | Late Fringe | Late Fringe | |
| 40 | 1:15 - 1:44:59 | A | Late Fringe | Late Fringe | |
| 41 | 1:45 - 2:14:59 | A | Overnight | **Overnight** | 4 hours |
| 42 | 2:15 - 2:44:59 | A | Overnight | Overnight | |
| 43 | 2:45 - 3:14:59 | A | Overnight | Overnight | |
| 44 | 3:15 - 3:44:59 | A | Overnight | Overnight | |
| 45 | 3:45 - 4:14:59 | A | Overnight | Overnight | |
| 46 | 4:15 - 4:44:59 | A | Early Early Morning | Overnight | |
| 47 | 4:45 - 5:14:59 | A | Early Early Morning | Overnight | |
| 48 | 5:15 - 5:44:59 | A | Early Early Morning | Overnight | |

## Appendix C: Guide Plus+ Advertising Glossary

**account executive:** Syn. "AE", A salesperson responsible for ad sales and account management.

**ad copy library:** A selection of "active" ads that an advertiser has available for airing at any one time.

**affidavit:** A notarized record of commercials sent (to the inserter), listing ad date and time, provided to advertisers; also called an affidavit of performance.

**availability/avail:** The commercial position that is available for purchase to an advertiser.

**broadcast:** Any message that is transmitted over a large area, not necessarily by a broadcast station, is said to be broadcast. For example, transmitting Guide Plus+ data via VBI lines is considered broadcasting.

**broadcast calendar:** A full year beginning with the first Monday in January which marks the first broadcast week. There are 52 weeks in the broadcast calendar.

**broadcast day:** The period between the sign-on and sign-off of a radio or TV station. The first daypart for a broadcast day is early, early morning, which is typically 4:00 AM – 6:00 AM. Although we will be displaying ads 24 hours a day (like most TV broadcasters do today), we will recognize 6:00 AM to be the beginning of our Guide Plus+ broadcast day.

**broadcast week:** A full week beginning with the first broadcast daypart on Monday and ending on the last daypart on Sunday.

**buy:** A purchased advertisement schedule.

**circulation:** In print media, the number of copies sold or distributed by a publication. In broadcast, the number of homes owning a set within a station's coverage area. In outdoor, the number of people passing an advertisement who have an opportunity to view it. In Guide Plus+ parlance, the number of Guide Plus+ enabled televisions.

**client:** The person directly responsible for **paying for** and/or supervising a session, project, or other entity.

**closing date:** The date set for receipt of material for an ad to appear in a forthcoming broadcast week. In Guide Plus+ terms, it will be the final date for ad creative and ad schedules to be approved by the client. Syn. "closing date".

**commercial pool:** A selection of television or radio commercials that an advertiser has available for airing at any one time. In Guide Plus+ terms, this will be the "active" ad copy library.

**confirmation:** A standard form used in Broadcasting to confirm the terms of an advertising contract and the strategy for deployment of a schedule. The confirmation also includes the estimated monthly charges that the advertiser will incur during the term of the contract.

**daypart:** A programming segment of a broadcast schedule, such as morning, afternoon, early, and late fringe for television.

**fixed position:** In broadcast, a commercial unit purchased with non-preemption guarantees.

**flight:** An advertising campaign that runs for a specific period such as four weeks. May also be the duration of the contract.

**GOMaker:** A paste-up tool that is used to create ads for display on Guide Plus+ equipped TVs.

**hiatus:** A period of non-activity.

**inventory:** Avail structure defined.

**lines:** Contract terms defined in a contract confirmation document. Each line represents specific traffic instructions for each creative for the term of the contract.

**makegood:** In broadcast, a commercial position given free in lieu of the announcement missed due to the fault of the broadcaster.

**network promo:** An announcement broadcast by a network to promote a specific program or the network itself. Also known as a promo.

**package:** A combination of spots offered to an advertiser as a unit, usually at a discount.

**picture-in-picture (PIP or P.I.P.):** A feature of television sets in which the viewer can see program inside a small window on the screen while watching another program on the same screen.

**preempt:** To replace a regularly scheduled program or commercial. A *pre-emptable* may be sold by a radio or TV station at a reduced rate (*pre-emptable rate*); the program or commercial is subject to cancellation prior to broadcast if another advertiser pays a higher rate.

**public service announcement (PSA):** A no-charge or significantly reduced charge ad that is run for a non-profit organization.

**rate card:** A pamphlet, brochure, or single sheet of paper that states the costs for advertising on or in an advertising vehicle as well as other pertinent information relating to the vehicle, (e.g., circulation, mechanical requirements, etc.)

**reconciling:** The process of comparing the traffic reports with the inserter reports for variances. Spots scheduled but not displayed must be processed back into the schedule for a *make-good (no charge re-run)* or refunded to the advertiser in the form of a credit.

**rotation:** In Guide Plus+, a pre-defined position of an ad within a schedule. Ad slots can have multiple rotations (we will begin with 4) that will display different ads each time the user exits and re-enters the Guide within the same avail time slot. For example, if there are 4 ads in a slot rotation, the user will be presented with ad A on their first entry into the Guide and will see ad B on their second entry and so forth. Rotations for this example can be either random or fixed. We will begin using fixed rotations.

**run of schedule (ROS):** An instruction to broadcast a commercial anytime during a broadcaster's schedule. ROS schedules can also be prioritized with ROS 1 schedules having higher priority than ROS 5 schedules.

**sales department:** The department that solicits and accepts advertising.

**slot:** The location of a program, announcement, news item, interview, or commercial on a broadcast schedule. In Guide Plus+, a slot is the physical position on the screen where the first level ad will appear. There are three slots for Panel Ads (top, bottom and both combined) and nine slots for Channel Ads (each of the channel slots on a Grid can be used for a Channel Ad).

**spots:** Refers to TV commercial announcements. In Guide Plus+ terms, a spot is synonymous with an ad or ad copy.

**time:** The period available for a an advertisement. A *time buyer* purchases broadcast time, perhaps with a *time contract* and at a *time discount*, a reduced price for quantity and/or frequency, from a *time card* that indicates a different *time charge* for each *time class* or *time slot* (a specific time period such as prime time or overnight).

**time slot:** A specific period in a schedule such as prime time or overnight.

**trade:** The acquisition of quantities of commercial time from broadcast stations in exchange for equal value or advertising. For example, NBC might provide advertising time to Gemstar to promote Gemstar products (Guide Plus+, VCR Plus+, etc.) on its network in exchange for equal amounts of advertising time on Gemstar products (e.g., Guide Plus+ panel ad space promoting NBC shows). Generally, no money is exchanged in trade advertising, but affidavits as proof of performance are exchanged.

**zone:** An area of coverage where all people see the same commercials. We define a zone as a region within a DMA.

# 1. Overview

This specification covers the following topics:

# 2. Ad Types (Spaces)

Topics covered are

## 2.1 Panel Ads

Panel ads occupy a fixed area in the Guide and are generally filled with paid advertisements. When a given ad space is not sold, the space will be filled in one of the following ways:

- Upon initial setup and before any ads are received, or after a loss of data, a Placeholder ad, stored in ROM, is inserted in the available space (see section 2.3).

    *NOTE: The Placeholder ads must be "timeless", as they will be displayed on initial setup (sometimes TVs may have been on store shelves for many months) and after power outages (which may occur years after first setup) until the next download is received.*

- After ads are received, an ad from a paying advertiser is displayed at no additional cost (bonus ad circulation, see section 2.4).

    *NOTE: The bonus circulation ads will be scheduled and inserted via IB in the same way as any paid ad. There are no special firmware requirements for bonus ad support.*

Panel ads will be the largest ads. Located directly below the PIP, there is space available in the Guide for two Panel ads. Each Panel ad occupies approximately 1/9th of the total screen area. As shown in Figure 1, the usable Panel ad area is 132 pixels high by 160 pixels wide, with 2 pixel wide black borders all around and 2 pixels of gray on the left and right sides and between the two ad spaces.

As shown in Figure 1, an advertiser may purchase both 1/9th screen areas, thus creating a single ad with a usable space of 270 pixels high by 160 pixels wide, with 2 pixel wide black border all around and 2 pixels wide of gray on the left and right sides.

Overall Area
(including borders)

274 pixels high
168 pixels wide

Panel Ad #1
Usable area:
132 pixels high
160 pixels wide

Panel Ad #2
Usable area:
132 pixels high
160 pixels wide

Single Ad combining
Panel Ads #1 & 2
Usable area:
270 pixels high
160 pixels wide

Borders:
2 pixels black all around
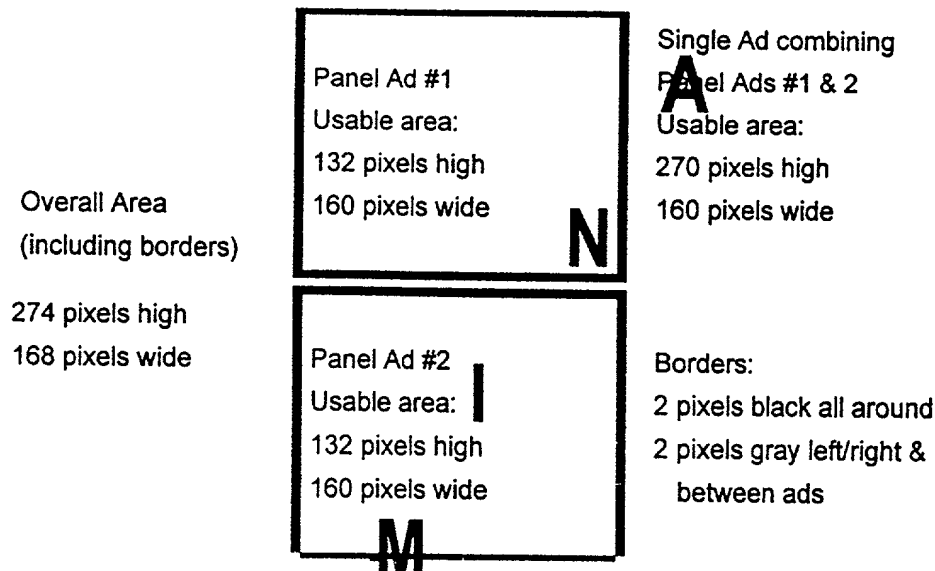2 pixels gray left/right &
    between ads

Figure 1. Panel Ad Dimensions

All Guide screens are made up of "hard pages." A hard page is defined as an area comprising 9 channel slots. Each time a user scrolls below the 9*x channel slot, a new hard page appears; scrolling up from the new hard page displays the previous hard page. Each hard page may have different Panel ads associated with it.

Note:    *Hard pages are defined differently in the Sort screens. Each sort category (for example, Movies, Sports, Children) will be considered one hard page regardless of the number of items in the list vertically. However, as the user moves horizontally from one category to the next, the Panel ads may change.*

The number of hard pages available depends on the size of the user's lineup and the number of channels turned On or Off. In the event that there are not enough channels to support the number of hard pages required for the number of Panel ads sold, not all Panel ads will be displayed.

For example:

Assume we have sold 4 pairs of Panel ads and 4 Channel ads. Additionally, assume the user has 20 active channels in their channel lineup. The ads would be displayed as follows

R Panel ad Pair 1 with channels 1-8 and the first Channel ad

Panel ad Pair 2 with channels 9-16 and the second Channel ad

• Panel ad Pair 3 with channels 17-20 and the third and fourth Channel ads

If the user turned On more channels, thus requiring the addition of a fourth hard page, the fourth Panel ad Pair would become visible.

When a user highlights an ad, an expanded information box automatically displays This expanded information box covers two thirds of the right-hand side of the Grid. The user closes the expanded information box either by moving the highlight off the Panel ad or by pressing the information button after the last related information box screen has been presented.

There can be multiple information screens displayed sequentially in the expanded information box. Pressing the information button while an ad is highlighted accesses these additional screens. There is no limit to the number of additional screens, other than memory limitations and selling requirements.

Normally, Panel ads are surrounded by black borders. When a panel ad is highlighted, the border turns yellow. When a program is set to record the border turns red (dark red when the Panel ad is not highlighted, light/bright red when highlighted). When a program is scheduled to watch, the border turns orange (dark orange when the Panel ad is not highlighted, light/bright orange when highlighted).

If a Panel ad is highlighted, has show information associated with it, and the advertised show is currently On, the user may tune directly to that program by pressing the Left Action button (the Blue button labeled "Watch") or by pressing the Enter/Select button on the remote. Pressing the Watch button also places the show in the Record/Watch Schedule; this allows the user to set the frequency to daily or weekly. If the show is not currently On, pressing the Left Action button places the show in the Record/Watch Schedule; pressing the Enter/Select button tunes to the channel related to the show in the ad. Shows added to the Record/Watch Schedule may be set to be viewed once, daily, or weekly.

*Note:* *The Watch feature and related Action button labels operate in the same way as if scheduling a show to Watch from the Grid.*

If a Panel ad has show information associated with it, the show may be recorded by highlighting the ad and pressing the Right Action button (the Green button labeled "Record"). If the show is currently On, recording begins immediately and the show is placed in the Record/Watch Schedule; this allows the user to set the frequency to daily or weekly. If the show is On in the future, that show is added to the Record/Watch Schedule for auto-recording. Shows added to the Record/Watch Schedule may be set to be recorded once, daily, or weekly.

*Note:* *The Record feature and related Action button labels operate in the same way as if scheduling a show to Record from the Grid.*

Panel ads can be dynamic. That is, the Panel ad area may change every *x* seconds rotating through *n* different graphical or textual ad executions (depending on available space) in the Panel ad space. When a Panel ad is highlighted, the ad rotation continues.

## 2.2 Channel Ads

Unlike Panel ads, Channel ads do not occupy a fixed area. Channel ads are essentially inserted between channels in the Grid, but a Channel ad cannot be dynamic (like Panel ads). If there are no Channel ads sold, the Grid will be a continuous list of channels/show tiles with no gaps. As these channel ads take up a channel slot in the Grid, it is desirable to limit how many are likely to appear on any one screen to ensure the Guide remains a useful source of TV programming information. (This limit would be approximately one Channel ad per hard page; this is a scheduling issue, not a firmware issue.)

A Channel ad is the height of a channel slot, the width of the grid, and is intermingled with the channel listings. The usable area for a Channel ad is 24 pixels high by 344 pixels wide, with 2 pixel wide bevels all around.

There are three types of Channel ads:

- **Relative (also called "every *n* ads")**

  Relative Channel ads appear in a position relative to the top of the Grid and are spaced every *n* channel slots. These ads appear and disappear as the user moves through the hard pages. It is anticipated that *n* will usually (but not necessarily always) equal 9, since this is the number of channels in the PIP version Grid. This would provide for one ad per hard page. A location for the first ad can be selected on the first page and subsequent ads will follow every *n* channel slots. The same ad is repeated every *n*th slot. This method of repeating every *n*th channel slot is true for both PIP and non-PIP versions (this allows equivalent selling of inventory.

  *Note    As a user turns channels Off, the spacing of these ads remains constant (that is, every n channel slots). In the event that there are not enough channels to continue this spacing, ads will appear at the end of the Grid listings.*

- **Parent**

  Parent Channel ads are linked to a specific channel located directly above the ad. A Parent Channel ad is attached to its adjacent "parent" channel (that is, the ad follows the parent channel).

  *if the parent channel is turned Off, the ad will be displayed at the bottom of the Grid.*

- **Fixed position**

  Fixed Position Channel ads are located in one specific location, *y* channels down from the top of the Grid. If *y* is greater than the number of channels in the Grid, the ad will appear at the end of the Grid listings.

Except as noted above regarding Parent and Fixed Position Channel ads, Channel ads will be spaced such that no more than one Channel ad is displayed at one time.

Vertically, these ads follow the channel listing information. These ads remain in a fixed position when the Grid is scrolled horizontally. The user can highlight these Channel ads like as a show title. When highlighted these Channel ads display additional information in the information box like a channel.

Unlike Panel ads, Channel ads are surrounded by bevels just like a show tile. However, Channel ad highlighting is similar to Panel ad highlighting. When a user highlights a Channel ad, the bevels change to a flat (non-beveled) yellow border. When a Channel ad show is set to record the border turns red (dark red when not highlighted, light/bright red when highlighted). When a Channel ad show is scheduled to watch,

the border turns orange (dark orange when not highlighted, light/bright orange when highlighted).
Highlighting schemes are the same for the Gold and Basic versions.

Y

R

A

N

I

M

I

L

E

R

P

Channel ads can have multiple, sequential information screens. The availability of this additional information is indicated by the "⊞" icon and is accessed by pressing the information button.

If a Channel ad is highlighted, has show information associated with it, and the advertised show is currently On, the user may tune directly to the related program either by pressing the Left Action button (the Blue button labeled "Watch") or by pressing the Enter/Select button on the remote. Pressing the Watch button also places the show in the Record/Watch Schedule. If the show is not currently On, pressing the Left Action button places the show in the Record/Watch Schedule for future auto-viewing; pressing the Enter/Select button tunes to the channel related to the show in the Channel ad. Shows added to the Record/Watch Schedule may be set to be viewed once, daily, or weekly.

*Note:* *The Watch feature and related Action button labels operate in the same way as if scheduling a show to Watch from the Grid.*

If a Channel ad has show information associated with it, the show may be recorded by highlighting the ad and pressing the Right Action button (the Green button, labeled Record). If the show is On now, recording begins immediately, and the show is placed in the Record/Watch Schedule. If the show is On in the future, it is added to the Record/Watch Schedule for recording. Shows added to the Record/Watch Schedule may be set for recording once, daily, or weekly.

*Note* *The Record feature and related Action button labels operate in the same way as if Recording a show from the Grid.*

## 2.3 Default Ads

When the Guide is first setup, the initial download of information will not have been received. The Panel ad spaces must be filled with Default ads that are stored in ROM. These ads must be "timeless", as they will appear each time a TV is set up, either for the first time or after a power outage. Channel ads do not require default ads. The Default panel Ads are defined as follows:

- Default Panel Ad 1 will include a review of the Guide features
- Default Panel Ad 2 will provide an overview of how to use the Guide

## 2.4 Bonus Ads

In the event that a Panel ad space is not sold, an ad from a paying advertiser will be inserted at no charge to the advertiser, as bonus circulation. These bonus ads will be allocated/scheduled according to our business needs. The bonus circulation ads will be inserted via IB in the same as any paid ad. There are no firmware requirements to support bonus ads differently than any other Panel ad.

## 3. Ad Features

Topics covered are

- Ad Content
- Background Colors                         (page 8)
- Interactive with TV                        (page 8)
- Interactive Information/Multiple Levels     (page 9)
- Dynamic Ad Blocks                          (page 9)

### 3.1 Ad Content

Ads may be made up of a graphics field, a text field, or a combination of a graphics and text field.

Graphics may be presented in

- 8 bit/pixel (using "320 mode")
- 4 bit/pixel (in "640 mode")
- 1 bit/pixel images

Due to memory limitations, Panel ads

- cannot contain graphics larger than 25% of the ad area when 4 or 8 bit/pixel graphics are used (see the 60 Minutes Ad, in section 6.4)
- can use 100% of the area for a 1 bit/pixel graphic (see the Home Improvement Ad screen in section 6.3)
- are limited to the channel logo portion of the ad for Channel ad graphics; the remaining portion of the Channel ad will be text only (see the MTV ad, in section 6.1)

Displayed text can have the following characteristics:

- available normal and condensed 18- and 24-point fonts
- oblique version of the font
- underlining
- bold
- centering
- left and right justification
- color can be selected once per line

Text could also be displayed as a 1 bit/pixel bitmap in the Panel ad areas only.

## 3.2 Background Colors

Background colors will have an impact on the overall look and usability of the Guide.

Panel ad background colors may be selected by the advertiser but will be subject to luminance constraints described in this section.

Channel ad background colors may be restricted. This is a scheduling/creative issue, not a firmware issue. Show tile background colors are used as keys for show categories (movies, sports, etc.) and actions taken on a show (set to record or watch). While most any background color could be displayed, it is desirable to maintain the integrity of the show tile color schemes. Therefore, it is likely that a list prohibiting the use of specific background colors or a set of colors will be created and given to advertising agencies for their use when developing Channel ad creative. Channel ad backgrounds will be subject to luminance constraints described in this section.

The Info. box background will be gray and can not be changed by the advertiser.

There are limitations on the luminance of the colors in the ads. If the luminance is set too high, the screen image will blister.

## 3.3 Interactive with TV

### 3.3.1 Tune-in Ads

Tune-in ads allow the user to tune directly to a show in progress from a highlighted ad block as long as the ad block has program information associated with it. An show in progress associated with an ad is directly tuned by either pressing the Enter/Select button or the Left Action button (the Blue button labeled "Watch").

### 3.3.2 Direct-record Ads

Direct-record ads allow the user to record a show in progress or scheduled for a later time from a highlighted ad block. There is no defined limit on how far into the future a direct-record associated show may be scheduled to air. A show associated with an ad is recorded by pressing the Right Action button while the ad is highlighted. The user may select a record frequency of once, daily, or weekly. From an ad, the user presses the Right Action button (the Green button labeled "Record") to place the show in the Record Schedule. In the event that the show is currently On, pressing the Right Action button while highlighting an ad allows recording of the show in progress. The show title is also placed in the Record Schedule in the event the user wishes to modify the record frequency to daily or weekly.

### 3.3.3 Watch Ads

A program advertised in an ad space may be placed into the Watch Schedule as long as the ad block has program information associated with it. There is no defined limit on how far into the future an associated show may be scheduled to air. The Watch feature operates in much the same way as the Record feature, except that it tunes the TV to the show rather than recording it. If a user is watching TV, the channel automatically changes to the show in the Watch Schedule when the show begins. If the TV is turned Off when a show in the Watch Schedule is scheduled to begin, the TV is turned On and tuned to the desired channel (TV implementations only, not VCR.) The user may select a watch frequency of once, daily, or weekly. From an ad, the user presses the Left Action button (the Blue button labeled "Watch") to place the show in the Watch Schedule. In the event that the show is currently On, pressing the Left Action button while highlighting an ad results in tuning directly to the show. The show title is also placed in the Watch Schedule in the event the user wishes to modify the watch frequency to daily or weekly.

## 3.4 Interactive Information/Multiple Levels

Ads may have multiple levels of information:

- First Level Information is the ad copy and/or graphics that are presented on screen with no user action. This comprises the Panel and Channel ad areas.

- Second Level Information (if provided by the advertiser) automatically becomes visible ("Auto-Open") when the user highlights an ad block by scrolling onto it. This secondary information is presented in the information box when a Channel ad is selected. When a Panel ad is highlighted, an expanded version of the information box covers the entire channel grid area. The "ⅈ" icon on the ad, placed at the advertiser's discretion, indicates there is more information available for that ad. The second level information may be text and/or graphics depending on memory availability.

  *Note:* *Channel logos at 1X or 2X are the only graphics likely to be supported in GUIDE 98 due to memory limitations.*

- Third Level Information (if provided by the advertiser) availability is indicated by the info. button "ⅈ" on a Second Level information screen. For Channel ads, pressing the information button causes the information box to expand and cover the entire grid area. This information can be multiple pages long. Pressing the information button successive times cycles the user through the pages. Pressing the information button from the last available screen causes the information box to return to its original size for all ads. The third level information may be text and/or graphics depending upon memory capabilities.

  *Note:* *Channel logos at 1X or 2X are the only graphics likely to be supported in GUIDE 98 due to memory limitations.*

## 3.5 Dynamic Ad Blocks

Memory permitting, the Panel ad graphics or text may change every $x$ seconds and rotate through $n$ different graphical or textual executions. There should be the capability to limit the number of dynamic ads displayed at any one time. The limit should be one per screen. This is a scheduling issue only.

## 4. Ad Buy Dimensions

Ad revenue ultimately will be driven by the number of ad impressions generated. Additionally, there are several variables which may increase the effectiveness of an impression and therefore add incremental revenue beyond a simple impression fee.

Topics covered are

- Ad Types                          (page 10)
- Ad Content/Memory                 (page 10)
- Interactivity with TV             (page 10)
- Duration                          (page 10)
- Rotation                          (page 10)
- Guide Section Location            (page 10)
- Ad Page Priority                  (page 10)
- Dynamics                          (page 11)

*Note* *Some of the sections that follow may be mutually exclusive.*

## 4.1 Ad Types

There are two basic ad types:

- Panel ads
- Channel ads

It is anticipated that Panel ads will command the higher price.

## 4.2 Ad Content/Memory

Depending upon memory limitations (and it is expected to be scarce), it may be appropriate to charge more per byte as ad memory use increases. Graphics create much higher memory demands than text. Dynamic graphics ads require dramatically more memory than dynamic text ads, etc.

Ads may have multiple levels of information (as described in section 3.4). Rates could vary depending upon the number of levels of information.

## 4.3 Interactivity with TV

Ads that are interactive with the TV, allowing tune-in, direct-recording, or watch schedule capabilities could be priced at a premium compared to non-interactive ads.

## 4.4 Duration (start time/end time)

Ads are purchased for display with a given start time and a related end time. The difference between the start time and end time is the ad's duration. The minimum duration increment is 60 seconds. The longer the duration, the greater the ad rate, although cost/second may decrease based on an increase in duration. An ad will not be replaced automatically when its end time is reached. Ads will only change when a user action causes a new hard page or causes a new section of the Guide to appear (for example, going from the Grid screen to the Sort screen).

## 4.5 Rotation

Ads can rotate. For example, different ads can appear each time the user enters the same page/section of the Guide. There is no defined limit on the number of ads placed in rotation. Ads will be assigned a priority with the ad of the highest priority being displayed the first time a hard page or section is accessed. Then the second priority ad is displayed the next time the user views this page and so forth. The priority counter is page dependent, meaning that if the user views the first page for a third time, they will see the third priority ad on that page, and if they then scroll to the second page for the first time, they will see the first priority ad on the second page.

## 4.6 Guide Section Location

Ads may differ by the section of the Guide the user is viewing. For example, if a user is viewing the Sports theme area, an ad for ESPN Sports Center may appear, whereas a different ad was presented when the user was on the main Grid.

## 4.7 Ad Page Priority

Every 9 Panel slots constitutes a hard page. Each hard page may have different Panel ads.

## 4.8 Dynamics

There are two different types of dynamic ads:

- **Graphic Dynamics Ads**

  Graphically dynamic ads present different graphics every $x$ seconds (with $x$ as small as 1.0 second) rotating through $n$ graphical executions. These ads are relatively memory intensive. An additional charge (likely more than $n$ times the cost of a single ad) could be collected for a dynamic ad based on the assumption that it will be significantly more effective than a static ad. Only a limited number of these ads could be displayed at any one time (likely a maximum of 1 per screen) as a busy screen will decrease the effectiveness of the ads and the utility of the Guide.

- **Text Dynamic Ads**

  A less memory intensive dynamic ad is one with a fixed graphic and a text area using the 18- or 24-point fonts and where only the text area changes every $x$ seconds. The fee for this may be less than a graphically dynamic ad.

## 5. Ad Inventory / Memory Usage

- It is assumed that 60k is available for storage of ads.
- 60k will support approximately 60 ads of the following mix:
  - ◊ 25 Panel Ads w/ 25% of the area containing a 4 bit/pixel graphic and the rest text
  - ◊ 25 Panel Ads that are all text
  - ◊ 10 Channel Ads

  *Note: This ad mix uses 54.8k - see Exhibit 1, Ad Memory Analysis - (assumes no dynamic ads).*

- Ads must be readily accessible once placed in memory, as advertisers may wish to pull an ad or to correct errors in transmission.
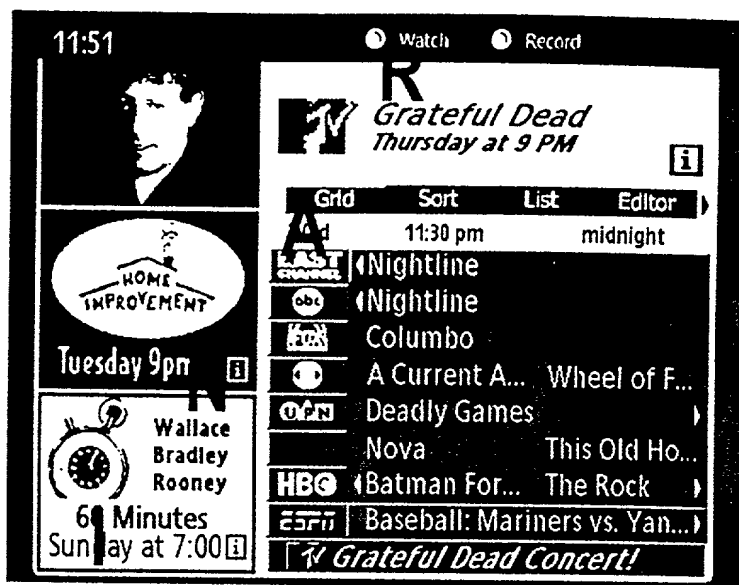
## 6. Ad Screens

### 6.1 Highlight Channel Ad

Moving the highlight to a Channel ad brings up the first level ad information in the info box. If this ad has show related information, the user can:

- Tune to it by pressing the Enter key.

- Record it by pressing the Right (Green) Action button, labeled "Record."

- Schedule it to be watched by pressing the Left (Blue) Action button, labeled "Watch."

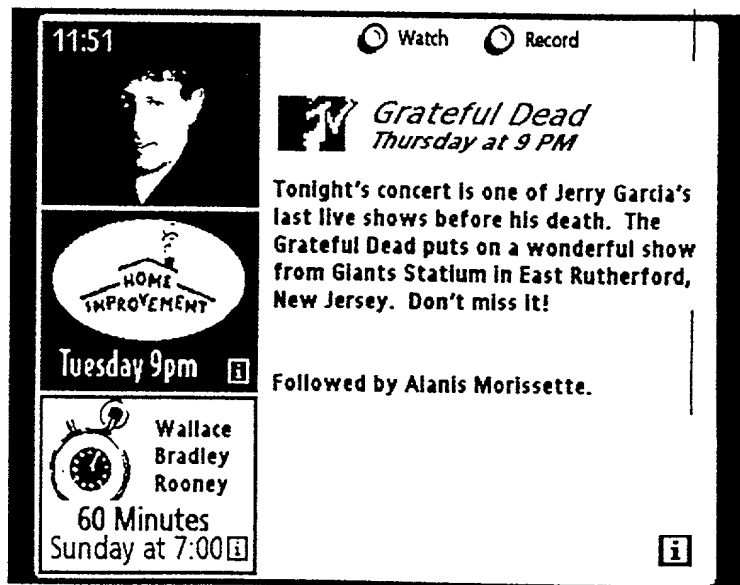- Obtain more information by pressing the 🅸 key (see the next screen).



### 6.2 Expanding a Channel Ad

Pressing the 🅸 key expands the info box presenting additional Channel ad information, if any exists.

*Note: The Watch and Record buttons now share the background color of the ad.*

- If additional pages of information exist, they are accessed by pressing the 🅸 key again.

- Pressing the 🅸 key on the last info screen available causes the info. Box to return to its original dimensions.

## 6.3 Highlighting Panel Ad #1

Highlighting a Panel ad automatically expands the information box.

- If additional pages of ad information exist, they are obtained by pressing the ⓘ key again.

- Pressing the ⓘ key on the last info screen available causes the info. box to return to its original dimensions.

- Pressing the right directional arrow closes the ad and moves the highlight to the last highlighted channel in the channel column.

- Pressing the down directional arrow moves the highlight to Panel ad #2.



11:51

ⓞ Watch    ⓞ Record

obc **Season Premier!**
**Tuesday at 9 PM**

Tim Allen continues to bring his unique slant on masculinity to his role as father, husband, and host of "Tool Time." Although he is beginning to feel the pangs of a mid-life crisis coming on, he is still convinced that "MORE POWER" is the ideal solution to most of life's challenges. Nowhere is this challenge more evident than in the Taylor household, where adolescence is in full throttle.

HOME IMPROVEMENT
Tuesday 9pm ⓘ

Wallace
Bradley
Rooney
60 Minutes
Sunday at 7:00 ⓘ

ⓘ

## 6.4 Highlighting Panel Ad #2

Scrolling down from Panel Ad #1 highlights Panel Ad #2 and automatically expands the information box.

- If further additional pages of ad information exist, they are obtained by pressing the ⓘ key again.

- Pressing the ⓘ key on the last info screen available causes the info. box to return to its original dimensions.

- Moving to the right closes the ad and moves the highlight to the last highlighted channel in the channel column.

- Pressing the up directional arrow moves the highlight to Panel ad #1.



11:51

ⓞ Watch    ⓞ Record

*Season Premier!*
*Sunday at 7:00*

Last season, 60 Minutes achieved an unprecedented 20th year as a Top 10 ratings performer. Its 63 Emmys are the most ever won by a news program. This year, the broadcast, in its 30th season on the CBS Television Network, continues with its trademark blend of investigative reports, interviews and profiles.

HOME IMPROVEMENT
Tuesday 9pm ⓘ

Wallace
Bradley
Rooney
60 Minutes
Sunday at 7:00 ⓘ

ⓘ

## 7. Ad Feature Summary

| Features Supported | Panel | Channel |
|---|---|---|
| Graphics | X | X |
| Text | X | X |
| Can be Highlighted | X | X |
| Direct-tune | X | X |
| Direct Record | X | X |
| Watch Schedule | X | X |
| Standard Info. Box with Info. | -- | X |
| Auto-Expanded Info. Box | X | -- |
| Additional Info. Screens | | X |
| Dynamic Graphics | X | X |
| Dynamic Text | X | X |
| Related to a page | X | -- |
| Every Nth Channel | -- | X |
| Related to a Parent Channel | -- | X |
| Fixed Channel Location | -- | X |

## 8. Ad Buy Dimensions Summary

| Dimension for Price Differentiation | Panel | Channel |
|---|---|---|
| Type of Ad | X | X |
| Levels of information | X | X |
| Memory Use | X | X |
| Direct-tune | X | X |
| Direct-record | X | X |
| Watch Schedule | X | X |
| Duration | X | X |
| Day Part | X | X |
| Guide Section Location | X | X |
| Guide Page Location | X | -- |
| Dynamic - Graphics | X | X |
| Dynamic - Text | X | X |
| Every Nth Channel | -- | X |
| Related to a Parent Channel | -- | X |

| Fixed Channel Location | | -- | x |
|---|---|---|---|

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## 10. EXHIBIT 1. Ad Memory Analysis

**EXHIBIT 1**

**Ad Memory Analysis**

4 bits/pixel graphics assumed

| | | |
|---|---|---|
| Screen Width | 528 | Screen Height 416 |
| Panel Width | 168 | Panel Height 136 |
| Total Border Width | 2 | Total Border Height 2 |

**Panel Ads**

| | |
|---|---|
| Ad Width | 168 | Ad Height 132 |

**Channel Ads**

| | | |
|---|---|---|
| Logo Area Width | 62 | Logo Height 24 |
| Text Area Width | 286 | Channel Height 24 |

| | |
|---|---|
| Assumed Compression | 50% |
| Assumed Memory | 60 |

**Usable Dimensions (ad area w/o bevels/borders)**

| Type of Ad | | Characters / page | Bits/ pixel or character | Rqd per ad Uncomprssed memory | Rqd per ad Compressed memory | Total Ad Capacity per type | Qtr Grphcs, Qtr Txt | Memory for Each Ad type | Target # of Ads per type | Memory per Ad Type |
|---|---|---|---|---|---|---|---|---|---|---|
| Panel Ad with Qtr Graphics and text | Graphic | | 4 | 11.1 | 5.5 | 10.8 | 43.3 | 1.4 | 25 | 34.7 |
| | Text | 640 | 1 | 0.6 | 0.32 | 187.5 | | 0.3 | | 8.0 |
| Text Only Panel Ad | Text | 640 | 1 | 0.6 | 0.32 | 187.5 | | 0.3 | 25 | 8.0 |
| Channel Ad | Graphic | | 4 | 0.7 | 0.37 | 161.3 | | 0.4 | 10 | 4 |
| | Text | 31 | 1 | 0.03 | 0.02 | 3871.0 | | 0.02 | | 0.2 |
| | | | | | | | | | Total Ads 60 | 54.8 |

| 10:03PM | ○ WATCH    ○ RECORD |
|---|---|
| **PIP WINDOW** | **PRIME TIME LIVE:** SAM DONALDSON INTERVIEWS TWO OF GOSPEL MUSIC'S PIONEERS, AMY GRANT AND SANDI PATTY. |
| DISPLAYING REAL TIME VIDEO FOR LAST CHANNEL VIEWED | ABC [13]          9:00PM (1h)          cc      ⊞ |

|  | GRID | SORT | SCHEDULE | MESSAGES | ▷ |
|---|---|---|---|---|---|
| SAT | 9:00PM | | 9:30PM | | |

| **AD WINDOW 1** | LAST CHANNEL | PRIME TIME LIVE |
|---|---|---|
| | ABC | PRIME TIME LIVE |
| DISPLAYING PANEL AD | FOX | AMER. MOST WANTED |
| ⊞ | CBS | EARLY EDITION |
| | MTV | SPICE GIRLS CONCERT TONIGHT |
| **AD WINDOW 2** | UPN | WALKING TALL |
| | PBS | ON GOLDEN POND |
| DISPLAYING PANEL AD | AMC | REMEMBER    YOUNG PHILA |
| ⊞ | ESPN | COLLEGE FOOTBALL |

*FIG. 1*

# Advertising Order Flow

A Contract/Sales Order is signed between an advertiser and a sales rep

T & B clerk develops and sends affidavit and invoice to advertiser.

The Clerk sets up Account information in the T & B system to place advertising order. Contract Confirmation is sent to advertiser

Artist receives an order # from T & B clerk and mock-up of ads from client via sales rep

T & B Clerk uses contract confirmation information to create a proposed schedule.

Ad proofing may take place via g-link to view on Guide Plus+ TV

Artist uses GOMaker tool to create ads

Iterative Review Process

Ads and Schedules are reviewed and approved by advertiser via sales rep

Following client schedule approval, T & B creates weekly Traffic Schedule and sends to IB

Ads are saved in GOMaker files. Confirmation is sent to T & B that ad copy is complete and ready for insertion.

IB transmits Ads based on T & B schedule

Inserters track and report when ads have been received for transmission. These reports are used by T & B for reconciliation.

Clerk performs reconciliation. Make-goods are returned to be re-scheduled, verified ads are sent for affidavit and invoice processing.

Ads are displayed on Guide Plus+ TVs

Figure 2

Docket No. :   36508/WWM/G207

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled SYSTEMS AND METHODS FOR ADVERTISING TRAFFIC CONTROL AND BILLING, the specification of which is attached hereto unless the following is checked:

__   was filed on __ as United States Application Number or PCT International Application Number __ and was amended on ___ (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or § 365(b) of the foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)

Application Number   Country          Filing Date (day/month/year)   Priority Claimed

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below.

Application Number   Filing Date

60/108,960        November 18, 1998

I hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s), or any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:

Application Number   Filing Date        Patented/Pending/Abandoned

**POWER OF ATTORNEY:** I hereby appoint the following attorneys and agents of the law firm CHRISTIE, PARKER & HALE, LLP to prosecute this application and any international application under the Patent Cooperation Treaty based on it and to transact all business in the U.S. Patent and Trademark Office connected with either of them in accordance with instructions from the assignee of the entire interest in this application;

or from the first or sole inventor named below in the event the application is not assigned; or from __ in the event the power granted herein is for an application filed on behalf of a foreign attorney or agent.

| | | | | | |
|---|---|---|---|---|---|
| R. W. Johnston | (17,968) | John D. Carpenter | (34,133) | Lucinda G. Auciello | (42,270) |
| D. Bruce Prout | (20,958) | David A. Plumley | (37,208) | Norman E. Carte | (30,455) |
| Hayden A. Carney | (22,653) | Wesley W. Monroe | (39,778) | Joel A. Kauth | (41,886) |
| Richard J. Ward, Jr. | (24,187) | John W. Eldredge | (37,613) | Patrick Y. Ikehara | (42,681) |
| Russell R. Palmer, Jr. | (22,994) | Gregory S. Lampert | (35,581) | Mark Garscia | (31,953) |
| LeRoy T. Rahn | (20,356) | Grant T. Langton | (39,739) | Gary J. Nelson | (44,257) |
| Richard D. Seibel | (22,134) | Constantine Marantidis | (39,759) | Raymond R. Tabandeh | (43,945) |
| Walter G. Maxwell | (25,355) | Daniel R. Kimbell | (34,849) | Phuong-Quan Hoang | (41,839) |
| William P. Christie | (29,371) | Craig A. Gelfound | (41,032) | Jun-Young E. Jeon | (43,693) |
| David A. Dillard | (30,831) | Syed A. Hasan | (41,057) | Kathy Mojibi | (41,409) |
| Thomas J. Daly | (32,213) | Kathleen M. Olster | (42,052) | Cynthia A. Bonner | (44,548) |
| Vincent G. Gioia | (19,959) | Daniel M. Cavanagh | (41,661) | Marc A. Karish | (44,816) |
| Edward R. Schwartz | (31,135) | Molly A. Holman | (40,022) | | |

The authority under this Power of Attorney of each person named above shall automatically terminate and be revoked upon such person ceasing to be a member or associate of or of counsel to that law firm.

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**SEND CORRESPONDENCE TO   :**   **CHRISTIE, PARKER & HALE, LLP**
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I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

| Full name of sole or first joint inventor<br>Henry C. Yuen | Inventor's signature | Date |
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| Full name of third joint inventor<br>Douglas B. Macrae | Inventor's signature | Date |
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